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...soil surveys can help you



Soil Conservation Service
U.S. Department of Agriculture

SOIL SURVEYS CAN HELP YOU

Soil surveys available from the Soil Conservation Service are intended for many different users. They can help a homebuyer or developer determine soil-related hazards or limitations that affect homesites. They can help land use planners determine the suitability of areas for housing or onsite sewage disposal systems. They can help a farmer estimate the potential crop or forage production of his land. They can be used to determine the suitability and limitations of soils for pipelines, buildings, landfills, recreation areas, and many other uses. This pamphlet explains just a few of the ways soil surveys can help land users.

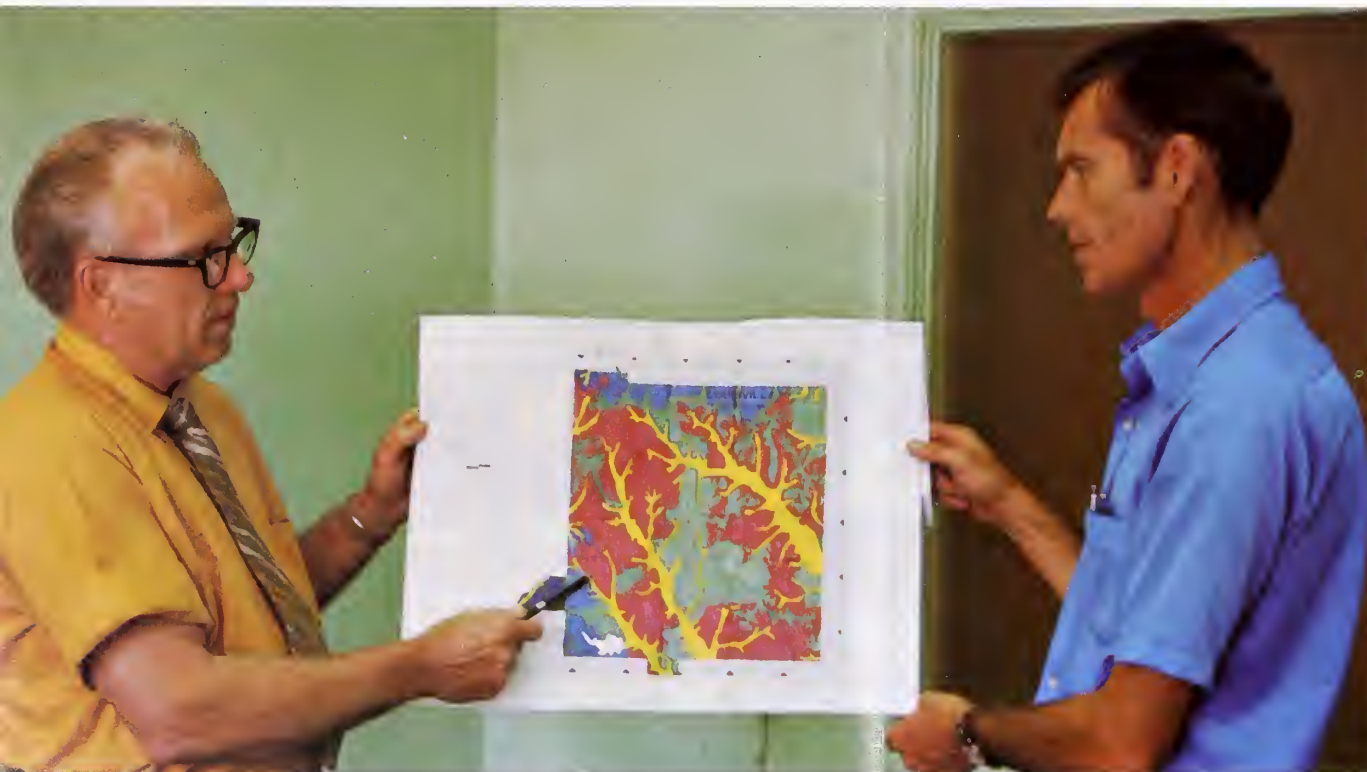
Why Soil Data Are Needed

Many people assume that soils are all more or less alike. They are unaware that great differences in soil properties can occur within even short distances.

Soils may be seasonally wet or subject to flooding. They may be shallow to bedrock. They may be too unstable to be used as a foundation for buildings or roads. Very clayey or wet soils are poorly suited to septic tank



Flooding and other hazards that affect buildings are indicated in soil surveys.



Soil maps colored to show soil limitations (red—severe, yellow—moderate, green—slight) for buildings, recreation, waste disposal, and other land uses provide a major reference for land use planning.



Soil surveys help in determining soil suitability for planting trees and in managing areas for commercial tree crops.

absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These soil properties and many others that affect land use are given in soil surveys. Each soil survey describes the properties of soils in the county or area surveyed and shows the location of each kind of soil on detailed maps.

Buying Land

Soil surveys can help in evaluating the suitability of a tract of land for the intended use before buying. Where soil maps show that



Soil properties that affect highway construction and other extensive projects can be determined from a soil survey.



A soil survey can be used to plan the development of recreation areas according to soil suitability and limitations.

soil-related hazards may damage structures or installations, alternate sites that have favorable soil properties can be selected or structural designs can be changed to compensate for the hazards. Soil maps and descriptions of the soils also can help in planning development in accordance with soil capabilities and limitations.

Evaluating Areas for Houses and Other Buildings

Soil properties are a major consideration for all building construction. The range of potential soil-related problems is great. Swelling and shrinking of certain kinds of clayey soils may crack walls and foundations. Flooding or high water tables may flood basements or damage buildings and other installations. Soils that are too clayey or too wet are not suitable for septic tank absorption fields. These and other soil-related problems can be anticipated through the use of soil surveys.

Determining Soil Properties That Affect Construction

Many soil properties affect the construction and maintenance of roads, pipelines, buildings, and other structures. Among the important soil properties described in soil surveys are:

- natural soil drainage
- permeability
- infiltration rate
- flood hazard
- depth to water table
- seasonal wetness
- depth to bedrock, stoniness
- erodibility
- acidity and alkalinity
- load bearing capacity
- slope
- content of sand, silt, and clay
- shrink-swell potential
- corrosivity
- soil structure

Soil surveys can help in evaluating routes for roads and pipelines and in anticipating soil-

related hazards for building construction. They also help in locating sources of sand and gravel and determining the kind of material in areas where excavation is required.

Planning Land Use

Soil surveys can help community planners determine the most appropriate areas for urban expansion. Soil surveys show areas that are subject to flooding and describe soil properties that affect septic tank absorption fields. The soil data can help planners in zoning flood plains, in determining the suitability of areas for various uses, and in applying the soil and water considerations of subdivision regulations and building codes to specific developing areas. Soil surveys can also help planners identify areas of prime agricultural land and areas that are best suited to use for recreation, wildlife, and open space.

Disposing of Liquid and Solid Wastes

Soil properties affect the function of septic tank absorption fields, sewage lagoons, and landfills. Soil surveys help in evaluating areas for such waste disposal systems. They also can help managers of feedlots, poultry processing plants, and similar enterprises in planning disposal of wastes into soils.

Managing Farm, Ranch, or Woodland

Soil surveys can be used to determine the potential tree, crop, or forage production of soils on woodland, farm, or ranch. The soil data help in planning management and conservation and can be used in appraising the productive capacity and the value of land for these purposes. In areas where forestry, farming, or ranching are an important part of the economy, soil surveys provide evaluations of soils for specific trees, crops, or range plants.

Landscaping

Soil properties are a major consideration in selecting and planting trees, shrubs, and

grasses for beautification and erosion control. Soil surveys describe soil properties that affect the growth of such plants.

Selecting Areas for Manmade Ponds, Recreation Facilities, and Wildlife

Land suitable for developing wildlife habitat, hunting areas, fishponds, and other recreation facilities can be selected through the use of soil surveys. The soil maps can help in planning the layout and maintenance of parks, dude ranches, ski areas, campsites, picnic areas, golf courses, cabins, and other recreation facilities. Development of land for private recreation use also can be planned through the use of soil surveys.

Planning Conservation

Conservation of land and water resources is an important part of all land use. The maps and soil descriptions in soil surveys can help in identifying specific conservation problems in a given area and planning measures to reduce erosion, sedimentation, subsidence, slippage, wetness, and other hazards.

How to Obtain a Soil Survey

You can call the local office of the Soil Conservation Service to determine whether a soil survey of the area that interests you is available. If you live in a conservation district, you can discuss soils and land use with the soil conservationist or soil scientist assigned to the district.

All programs and services of the Soil Conservation Service are offered on a nondiscriminatory basis, without regard to race, color, national origin, religion, sex, age, marital status, or handicap.

September 1974

Reviewed and approved for reprinting August 1988.